



U.S. Department of Transportation
Privacy Impact Assessment
Federal Railroad Administration (FRA)

**Locomotive Image and Audio Recording Devices for
Passenger Trains**
Final Rule

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Executive Summary

The Fixing America's Surface Transportation Act (FAST Act), codified at 49 U.S.C. 20168, requires FRA (as the Secretary (Secretary) of the U.S. Department of Transportation's (DOT) delegate) to promulgate regulations requiring each railroad carrier that provides regularly scheduled intercity or commuter rail passenger transportation to the public to install inward- and outward-facing image recording devices in all lead passenger train locomotives. In light of the FAST Act mandate, relevant National Transportation Safety Board (NTSB) recommendations, discussions of the Railroad Safety Advisory Committee (RSAC) Recording Devices Working Group, accident history, and railroad safety violations that FRA had investigated, FRA has issued a final rule which requires inward- and outward-facing locomotive image recording devices (cameras) be installed on all lead locomotives used in intercity or commuter passenger rail service. These devices must record whenever the lead locomotive is moving at any train speed as well as record and retain at least the last 12 hours of recorded footage in a certified crashworthy event recorder memory module,¹ or on an alternative, remote storage system that provides at least equivalent data protections as provided by the module and has been approved by FRA.²

Furthermore, any data recorded by a locomotive image recording device, or a voluntarily installed audio recording device, from an accident/incident reportable to FRA³ must be retained by the railroad for one year after the date of the accident/incident for analysis by FRA or other Federal agencies. If requested, the railroad must provide the image and/or audio data in a format readable by FRA or other Federal agencies, or make available any platform, software, media device, etc., that is required to play back the image and/or audio data. The requirements of the final rule do not require image and/or audio recording devices be installed in freight locomotives.

The final rule requires that within four years of its publication, each lead locomotive used in intercity or commuter passenger rail service must be equipped with compliant inward- and outward-facing image recording systems. The recordings from inward- and outward-facing locomotive cameras required by the rule will assist FRA in investigating railroad accidents/incidents as well as violations of Federal railroad safety laws and regulations. In post-accident/incident analysis, locomotive camera footage will provide investigators with

¹ The criteria for certification of a crashworthy event recorder memory module can be found at 49 CFR part 229, appendix D.

² While not required by this final rule, any voluntarily installed audio recording device on a lead locomotive used in intercity or commuter rail passenger service must store its recordings on a certified crashworthy event recorder memory module, similar to the requirement for locomotive cameras recordings.

³ See 49 CFR part 225.



potentially critical information that cannot be obtained from other sources, including locomotive event recorders.

For instance, while locomotive event recorders provide information on data elements including locomotive speed and the amount and time of the locomotive's brake application, locomotive camera recordings may be particularly useful in accidents arising from human factor causes, as image data can show investigators what the train crew was doing in the locomotive from a perspective that event recorders cannot provide. Therefore, together with locomotive event recorders, locomotive cameras will provide inspectors with a comprehensive perspective of what was occurring inside and outside of the locomotive immediately before an accident. FRA anticipates that this will help the agency better understand the cause(s) of accidents involving intercity passenger or commuter trains, which can then be used to inform future agency actions to help prevent future accidents.

Passenger locomotive image recordings may also be used by passenger railroads themselves to investigate FRA reportable accidents/incidents, ensure employee compliance with relevant railroad safety rules and regulations, as well as assist a railroad with performing Federally-mandated operational testing.⁴ Passenger locomotive cameras may also be used by railroads to fulfill security functions, such as monitoring locomotives for unauthorized occupants or trespassers or to assist law enforcement investigations of criminal incidents or acts of terrorism.

The video recordings made by locomotive cameras and retained by the railroads may allow them to identify persons occupying the locomotive cab (or in some instances persons located outside the locomotive cab) by facial or other physical features, which is considered Personally Identifiable Information (PII) that FRA may gather during investigations about such persons or during investigations into rail accidents/incidents or violations of Federal railroad safety laws. This privacy impact assessment (PIA) is therefore necessary to provide information regarding the final rule's requirement that inward- and outward-facing image recording devices be equipped on all lead passenger locomotives and to determine why and how PII will be stored and used, thereby fulfilling the requirements of Section 552 of the Consolidated Appropriations Act of 2005 (codified at 42 U.S.C. 2000ee-2). This PIA is available in the public docket for the final rule in the rulemaking docket (Docket No. FRA 2016-0036) and on the U.S. Department of Transportation's (DOT) privacy Web site at www.dot.gov/privacy.

⁴ See 49 CFR part 217.



What is a Privacy Impact Assessment?

The Privacy Act of 1974 articulates concepts for how the federal government should treat individuals and their information and imposes duties upon federal agencies regarding the collection, use, dissemination, and maintenance of personally identifiable information (PII). The E-Government Act of 2002, Section 208, establishes the requirement for agencies to conduct privacy impact assessments (PIAs) for electronic information systems and collections. The assessment is a practical method for evaluating privacy in information systems and collections, and documented assurance that privacy issues have been identified and adequately addressed. The PIA is an analysis of how information is handled to—i) ensure handling conforms to applicable legal, regulatory, and policy requirements regarding privacy; ii) determine the risks and effects of collecting, maintaining and disseminating information in identifiable form in an electronic information system; and iii) examine and evaluate protections and alternative processes for handling information to mitigate potential privacy risks.⁵

Conducting a PIA ensures compliance with laws and regulations governing privacy and demonstrates the DOT's commitment to protect the privacy of any personal information we collect, store, retrieve, use and share. It is a comprehensive analysis of how the DOT's electronic information systems and collections handle personally identifiable information (PII). The goals accomplished in completing a PIA include:

- *Making informed policy and system design or procurement decisions. These decisions must be based on an understanding of privacy risk, and of options available for mitigating that risk;*
- *Accountability for privacy issues;*
- *Analyzing both technical and legal compliance with applicable privacy law and regulations, as well as accepted privacy policy; and*
- *Providing documentation on the flow of personal information and information requirements within DOT systems.*

Upon reviewing the PIA, you should have a broad understanding of the risks and potential effects associated with the Department activities, processes, and systems described and approaches taken to mitigate any potential privacy risks.

⁵Office of Management and Budget's (OMB) definition of the PIA taken from guidance on implementing the privacy provisions of the E-Government Act of 2002 (see OMB memo of M-03-22 dated September 26, 2003).



Introduction & System Overview

Overview: Federal Railroad Safety Regulations

FRA's primary mission is to regulate railroad safety in the United States. One of the ways in which FRA does so is by developing and enforcing data-driven regulations that balance railroad safety with industry efficiency to reduce railroad accidents, damage to property, environmental damage, injuries, and fatalities. FRA promulgates and enforces a comprehensive regulatory program under the Federal railroad safety laws. FRA's rail safety regulations address issues such as: railroad track, signal systems, railroad communications, rolling stock, rear-end marking devices, safety glazing, railroad accident/incident reporting, operating practices, alcohol and drug testing, locomotive engineer and conductor certification, use of personal handheld devices, workplace safety, hours of service for passenger train employees, and positive train control system implementation. In other words, FRA's rail safety regulations help target the causes of railroad accidents.

In furtherance of this goal, the accompanying final rule requires the installation and use of inward- and outward-facing recording devices on all lead passenger locomotives used in in intercity or commuter passenger service to promote railroad safety.

FRA has become increasingly concerned about railroad accidents involving human factors, like those referenced in the final rule, where there is a lack of information to conclusively determine what caused or contributed to an accident. In particular, FRA also has increasing concern about railroad accidents and safety violations caused by distracted on-duty railroad employees and contractors using electronic devices while performing safety-related duties. These incidents continue to occur even after Federal and industry efforts to prohibit on-duty operating employees from using such distracting devices following a 2008 accident in Chatsworth, California, where a locomotive engineer who was text messaging caused an accident which resulted in the deaths of 24 railroad passengers and himself. In addition, the NTSB has characterized the use of personal electronic devices in the railroad industry as pervasive. As a result, FRA has concluded that the use of inward- and outward-facing locomotive cameras are necessary to combat these unsafe practices that endanger public safety, and the need to address this continuing safety risk outweighs any railroad crew concerns regarding personal privacy while they operate passenger trains or perform other safety-critical functions in a lead locomotive cab.



The image recording device requirements in the final rule will supplement FRA's existing locomotive event recorder requirements.⁶ Locomotive event recorders record numerous operational parameters that assist in accident/incident investigations and prevention and are required on the lead locomotives of trains traveling over 30 mph. Event recorders are an important tool in accident/incident investigations and prevention and are required by statute.⁷ A video of the locomotive engineer from an inward-facing locomotive camera supplements the event recorder requirement by providing railroads and Federal and State accident investigators visual information regarding an engineer's actual manipulation of locomotive controls and other actions, the operating environment, and other factors that could affect a train's operation prior to an accident and other information that cannot readily be provided by locomotive event recorders. Importantly, such videos recordings, when regularly reviewed by railroads, should also provide a deterrent to train crews' distracting use of personal electronic devices, which have caused railroad accidents.

Collection of PII

Passenger railroad employees or any other person in a locomotive cab (e.g., FRA railroad safety inspectors) or outside the locomotive cab (e.g., pedestrians, motorists at highway-rail grade crossings), who are recorded by a locomotive's image recording (or audio, if installed) system, could be identified based on the recording of their face or other features. Thus, this PII for the individuals identified in locomotive image (or audio) recordings may be gathered by FRA when investigating passenger railroad accidents/incidents or Federal railroad safety violations. This could include information such as the name, date of birth, address, telephone number, railroad employee identification number, etc. of individuals related to FRA's investigation. When an FRA reportable railroad accident occurs, a railroad must retain recordings for one year from the date of the accident.⁸ FRA, the NTSB, or other Local, State, or Federal law enforcement officials may then take possession of the recordings for investigative purposes.

Types of PII that may be acquired during an accident/incident or Federal railroad safety violation investigation can vary based upon what FRA is investigating; however, for accident/incident investigations, FRA may collect employment, certification/qualification, disciplinary, and Federally mandated hours of service records, drug and alcohol testing records, visual or audio records (from the railroad or other sources) or any other record that may provide information that will help FRA determine the causal factors of an accident/incident. While the vast majority of any PII FRA collects during an

⁶ See 49 CFR 229.135.

⁷ See 49 U.S.C. 20137.

⁸ See 49 CFR 229.136(f)(2).



accident/incident or Federal railroad safety violation will be related to railroad employees or train crews, there is the potential that as part of investigation FRA could tangentially receive PII that identifies pedestrians or motorists, especially during accident/incidents or violations involving trains at highway-rail grade crossings.

FRA collects video and audio locomotive recordings from the railroads, not by directly downloading the data itself, but by requesting or receiving the data from the railroad, or the NTSB when they are conducting an investigation. After investigating thousands of railroad accidents/incidents or violations of Federal railroad safety regulations over the years, FRA's experience is that system downloaded data from a locomotive is not easily manipulated and it would take extensive efforts to tamper with the data.

However, the final rule takes steps to ensure locomotive video and, if voluntarily installed, audio recording data be protected by requiring that data be recorded on a certified crashworthy event recorder memory module, which will help prevent the destruction of the data and maintain its integrity in the case of a catastrophic accident or incident.⁹ Railroads are also required to use electronic security measures, and apply appropriate cybersecurity measures, to prevent unauthorized access to, and download, deletion, or alteration of, the locomotive's image and, if present, audio recording systems or their recordings.¹⁰ This is an expansion of the protections proposed by the notice of proposed rulemaking (NPRM) for this rule, where FRA proposed that passenger railroads only be required to use electronic security measure(s) to prevent unauthorized downloading of the image or audio recording system. These additional required protections in the final rule will help to further protect the locomotive recording device data from outside access or unlawful downloading.

Finally, the final rule requires that railroads with locomotives in intercity or commuter passenger service adopt, maintain, and comply with a chain-of-custody procedure governing the handling and the release of locomotive image recordings as well as any locomotive audio recordings that may be present as well as makes tampering with passenger locomotive-mounted image and audio recording equipment a violation of Federal regulations.¹¹ These requirements will help ensure that integrity of locomotive recording device data.

Privacy Concerns and Consideration by FRA

The FAST Act mandated that FRA (as the Secretary's delegate) promulgate regulations requiring the installation of inward- and outward- facing recording devices on lead passenger train locomotives. The recording is done outside the locomotive in its direction of

⁹ See 49 CFR 229.136(a)(5).

¹⁰ 49 CFR 229.136(d).

¹¹ See 49 CFR 229.136(f)(1) and 49 CFR part 218, appendix C.



travel or inside the locomotive cab, where only the engineer and other train crew members should be occupying during an on-duty period. Further, many train crew actions in operating trains are already recorded by locomotive event recorders required under 49 CFR part 229. The FAST Act also prohibits railroads from using in-cab audio or image recordings to retaliate against an employee (49 U.S.C. 20168(i)).

FRA has also addressed Congress' intent regarding retaliation in the final rule by limiting how passenger railroads can use audio or image recordings.¹² For example, while passenger railroads can use locomotive cameras or audio recordings devices to conduct operational testing, railroads are limited in that they can only randomly select subjects for testing using objective, neutral criteria. Railroads are prohibited from selecting employee using subjective factors or its own discretion on what employee should be tested. Finally, the testing must be performed within 72 hours after the employee ends their tour of duty. These factors ensure that operational testing is conducted in a way that is fair, objective and not used as a vehicle to retaliate against any railroad employee. FRA can also review any railroad operational testing procedure and disapprove a railroad's testing procedures if necessary.¹³

In addition to these anti-retaliation requirements, any use of locomotive image or audio recordings to discharge, demote, suspend, reprimand, or in any other way discriminate against a railroad employee providing information or assisting in a federal railroad safety investigation would be in violation of 49 U.S.C. 20109 (railroad employee whistleblower law). Likewise, interference with protected labor activities would also violate the FAST Act statutory protections discussed above. FRA strongly recommends that railroads adopt and adhere to policies that strictly prohibit such potential non-safety related abuses of PII or locomotive recordings.

Similarly, FRA has instituted policies and takes substantial care to make sure that video or audio recordings or other PII taken into its custody as part of an accident/incident investigation is kept confidential and the integrity of the data is not compromised. For example, all records acquired by FRA related to an accident/incident investigation are stored in the internal Factual Accident Reporting System (FARS) database. To prevent unauthorized access, FARS is housed on FRA's secure site and can only be accessed by authorized users using a Personal Identity Verification (PIV) credentials or login.gov to access it. Any video or audio files FRA receives as part of its investigation are stored on FARS. Any audio file or video that is currently too large to be stored on FARS (50 MBs or larger) is described or transcribed by an FRA inspector and then the original audio file or video is destroyed. FARS is currently undergoing a modification that will increase the size limit of audio files and videos that can be stored on the system; however, FRA will maintain

¹² See 49 CFR 229.136(f)(3).

¹³ See 49 CFR 217.9(b)(3) and (4).



the same process and procedures for record retention based on the new file size limits after the system's modification is complete.

Once documents or data are uploaded into FARS, it remains within the limited access system. Valid privacy concerns exist on the appropriate protection and dissemination of locomotive recordings that are made, particularly where an accident has occurred, and the recordings may be graphic and violent. However, PII contained within video or audio recordings that FRA takes possession of after a railroad accident occurs is protected through the FAST Act, 49 U.S.C. 20168(h), from public disclosure, with the exception that FRA, as the Secretary's delegate, may make public parts of any written transcript or depiction of visual information it finds relevant to the accident at the time a majority of other factual reports on the accident or incident are released to the public. This protection not only applies to video or audio recordings from passenger locomotives, but recordings from freight locomotives as well. Therefore, video or audio files of accidents/incidents within FRA's possession are exempt from Freedom of Information Act (FOIA) requests. These information protections from FOIA as well as allowances to release written transcripts or depiction of visual information when providing information to the public about the accident or incident is similar to the abilities granted to NTSB, which are also provided via statute.¹⁴

As for PII contained in documents or records that are not videos or audio files that FRA investigators acquire during an accident/incident investigation, these documents or records are subject to FOIA and will be released by FRA unless another specific FOIA exception applies. However, before dissemination, the documents are reviewed by FRA employees who work specifically on these requests and makes sure that all PII in these documents are redacted before release.

FRA sometimes shares documents including PII from its accident investigations with NTSB at the agency's request. Per statute, when NTSB investigates a railroad related accident/incident it is the priority investigating entity of the United States Government and FRA cooperates with the agency's investigation to the extent of its ability.¹⁵ Therefore, when NTSB requests records or evidence from FRA, the agency provides those documents. However, the documents provided to NTSB are still FRA documents and cannot be released without FRA's approval. FRA also can, and has, requested that documents containing sensitive information or PII be placed on a private docket available only to NTSB investigators and no other non-governmental entities participating in NTSB's investigations. Finally, NTSB, like FRA, is statutorily prohibited from releasing video or audio recordings from accidents/incidents it is investigating until the NTSB holds a public hearing on the

¹⁴ See 49 U.S.C. 1114.

¹⁵ See 49 U.S.C. 1131.



accident or releases a majority of the factual reports on the accident are placed in the public docket.¹⁶

Therefore, FRA has taken steps and will continue to take steps to protect the PII found in video and audio recordings taken from locomotives. These devices record the actions of train crews as well as the environment and other factors occurring while the train is being operated. However, these same actions and factors can be visually observed by a railroad manager or FRA railroad safety inspector aboard a locomotive. Under relevant laws (including the FAST Act's mandate), court decisions, and FRA's statutory authority to regulate all areas of railroad safety, FRA asserts there is no reasonable expectation of privacy in a locomotive cab when railroad employees are performing safety-related duties, as long as there are no video or audio recordings within the locomotive's "sanitation compartment," which are prohibited by the final rule. The United States Supreme Court has also found train crew members working in a locomotive cab also have a lower expectation of privacy stating, "the expectations of privacy of covered employees [here, train crewmembers] are diminished by reason of their participation in an industry that is regulated pervasively to ensure safety"¹⁷

Fair Information Practice Principles (FIPPs) Analysis

The DOT PIA template is based on the fair information practice principles (FIPPs). The FIPPs, rooted in the tenets of the Privacy Act, are mirrored in the laws of many U.S. states, as well as many foreign nations and international organizations. The FIPPs provide a framework that will support DOT efforts to appropriately identify and mitigate privacy risk. The FIPPs-based analysis conducted by DOT is predicated on the privacy control families articulated in the Federal Enterprise Architecture Security and Privacy Profile (FEA-SPP) v3¹⁸, sponsored by the National Institute of Standards and Technology (NIST), the Office of Management and Budget (OMB), and the Federal Chief Information Officers Council and the Privacy Controls articulated in Appendix J of the NIST Special Publication 800-53 Security and Privacy Controls for Federal Information Systems and Organizations¹⁹.

Transparency

Sections 522a(e)(3) and (e)(4) of the Privacy Act and Section 208 of the E-Government Act require public notice of an organization's information practices and the privacy impact of government programs and activities. Accordingly, DOT is open and transparent about

¹⁶ See 49 U.S.C. 1114(d) and 1154(a).

¹⁷ *Skinner v. Railway Labor Executives Association*, 489 U.S. 602, 627 (Mar. 21, 1989).

¹⁸ <http://www.cio.gov/documents/FEA-Security-Privacy-Profile-v3-09-30-2010.pdf>

¹⁹ http://csrc.nist.gov/publications/drafts/800-53-Appendix-J/IPDraft_800-53-privacy-appendix-J.pdf



policies, procedures, and technologies that directly affect individuals and/or their personally identifiable information (PII). Additionally, the Department should not maintain any system of records the existence of which is not known to the public.

To promote transparency, FRA issued a NPRM for this rule on July 24, 2019, proposing inward- and outward-facing image recording devices be required on all lead passenger train locomotives. In the preamble to that NPRM, FRA included a “Privacy Concerns” section. The NPRM was posted on regulations.gov for public review and comment. In addition, a PIA for the NPRM was included in the rulemaking docket.

FRA received comments from fifteen different individuals or organizations in response to the NPRM. FRA carefully considered the public comments in response to the NPRM and is now issuing the final rule amending the regulatory requirements of Railroad Operating Rules (49 CFR part 217), Railroad Operating Practices (49 CFR part 218), Railroad Locomotive Safety Standards (49 CFR part 229), and Texas Central High-Speed Rail Safety Standards (49 CFR part 299). Prior to the development of this rulemaking, the Railroad Safety and Advisory Committee (RSAC) established the Recording Devices Working Group to recommend specific actions regarding the installation and use of locomotive-mounted recording devices, such as inward- and outward-facing video and audio recorders. RSAC is composed of representatives from all facets of the railroad industry, from railroad carriers to labor to industry associations.

FRA is issuing this PIA as mandated by the E-Government Act of 2002. This PIA assesses the privacy risk associated with the collection of the PII associate with the enforcement of the final rule. PIA is a practical method for evaluating privacy in information systems and collections, and documented assurance that privacy issues have been identified and adequately addressed. This PIA is an analysis of how information is handled to: (i) ensure handling conforms to applicable legal, regulatory, and policy requirements regarding privacy; (ii) determine the risks and effects of collecting, maintaining, and disseminating information in identifiable form in an electronic information system; and (iii) examine and evaluate protections and alternative processes for handling information to mitigate potential privacy risk.

For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> at any time.

Individual Participation and Redress

DOT provides a reasonable opportunity and capability for individuals to make informed decisions about the collection, use, and disclosure of their PII. As required by the Privacy Act, individuals should be active participants in the decision-making process regarding the



collection and use of their PII and they are provided reasonable access to their PII and the opportunity to have their PII corrected, amended, or deleted, as appropriate.

If FRA takes possession of image or audio recordings, the FAST Act requires that FRA not publicly disclose these recordings, or transcripts of oral communications between train, operating, and communication center employees related to an accident FRA is investigating. FRA may make public a transcript or a written description of visual information it deems relevant to the accident at the time other factual reports on the accident are released to the public.

Individuals may request access to their own records maintained in a system under DOT control by complying with DOT Privacy Act regulations found in 49 CFR part 10. Privacy Act requests for access to an individual's records must be in writing, and may be mailed, faxed, or emailed. The request must also include a completed privacy waiver form.

Title 49 CFR part 10 requires the request to include a description of the records sought, the requester's full name, current address, and date and place of birth. The request must be signed and either notarized or submitted under penalty of perjury. Additional information and guidance regarding DOT's Freedom of Information Act/Privacy Act program may be found on the DOT Web site (www.dot.gov/foia) or by writing to this address or e-mail:

Federal Railroad Administration
Attn: FOIA Team
1200 New Jersey Avenue SE
Washington, DC 20590
Fax: (202) 493-6068
Attn: FOIA Team
E-mail: FRAFOIA@dot.gov

Purpose Specification

DOT should (i) identify the legal bases that authorize a particular PII collection, activity, or technology that impacts privacy; and (ii) specify the purpose(s) for which it collects, uses, maintains, or disseminates PII.

FRA is publishing this final rule as required by the FAST Act, which expressly mandates that FRA (as the Secretary's delegate) promulgate regulations requiring each railroad carrier that provides regularly scheduled intercity rail passenger or commuter rail passenger transportation to the public to install inward- and outward-facing image recording devices on all controlling locomotives of passenger trains.



The FAST Act expressly provides three permissible uses of locomotive image recordings on passenger trains. The three purposes stated in the FAST Act are: (1) verifying that train crew actions are in accordance with applicable safety laws and the railroad carrier's operating rules and procedures; (2) assisting in an investigation into the causation of a reportable accident or incident; and (3) to document a criminal act or monitoring unauthorized occupancy of the controlling locomotive cab or car operating compartment. FRA has incorporated these limited uses into the final rule to ensure this regulation closely follows the FAST Act's requirements.

As previously stated, FRA requires the installation of inward- and outward-facing locomotive image recording devices on all lead locomotives in passenger trains. These devices will record while a lead locomotive is in motion at any train speed and retain at least the last twelve hours of recorded data in a certified crashworthy event recorder memory module, or on an alternative, remote storage system that provides at least equivalent data protections as provided by the module and has been approved by FRA. Locomotive-mounted image recording devices (and potentially audio recording devices) will supplement locomotive event recorders by providing railroads and Federal and State accident investigators information regarding an engineer's use of locomotive controls, information about the engineer's actions and environment, and other relevant factors prior to an accident. Such recordings, when regularly reviewed by passenger railroads, may also provide a deterrent to train crews' distracting use of personal electronic devices, which the NTSB cites as the cause of several railroad accidents. The recordings would provide necessary evidence to FRA, so appropriate corrective or enforcement actions can be taken.

Data Minimization & Retention

DOT should collect, use, and retain only PII that is relevant and necessary for the specified purpose for which it was originally collected.

The final rule requires the installation of inward- and outward-facing locomotive image recording devices on all lead locomotives in passenger trains. FRA is requiring that these devices record while a lead locomotive is in motion and that at least the last twelve hours of recorded data be retained in a certified crashworthy event recorder memory module, or an alternative, remote storage system that provides at least equivalent data protections as provided by the module and has been approved by FRA. This recorded data may be used by railroads to investigate accidents and to ensure employee compliance with relevant railroad safety rules and regulations. In addition, FRA and other Federal investigative agencies may use this data during railroad accident investigations and it may also be used in the investigation of railroad safety violations or criminal incidents.



FRA has the statutory responsibility to conduct railroad accident investigations (see 49 U.S.C. 20107(a) and 20902). The final rule allows FRA, and other Federal investigative agencies such as the NTSB, to take possession of locomotive recordings after reportable railroad accidents/incidents under 49 CFR part 225 occur, or to investigate violations of Federal railroad safety regulations, laws, or orders. Upon the occurrence of a FRA reportable accident, the final rule requires passenger railroads to retain any locomotive recordings from the accident for one year after the accident date. While the FAST Act prohibits FRA from publicly releasing locomotive image recordings that the agency takes possession of (49 U.S.C. 21068(h)), FRA may publicly release a transcript or written depiction of visual information it deems relevant to an accident at the time other factual reports on an accident are released to the public.

Locomotive image recordings that FRA takes possession of may be in the physical possession of FRA staff participating in investigations of accidents or violations of Federal rail safety requirements and would be governed by FRA's existing chain-of-custody procedures that govern the handling of all evidence during railroad accident investigations. Such recordings may also ultimately be stored on FRA's computer systems, to include the FARS and the Railroad Compliance System (RCS). Image recordings in FRA's possession may be utilized as evidence in FRA enforcement actions in accordance with the agency's current practices for handling evidence. FRA will retain these records based on FRA's current record retention schedules.

Use Limitation

DOT shall limit the scope of its PII use to ensure that the Department does not use PII in any manner that is not specified in notices, incompatible with the specified purposes for which the information was collected, or for any purpose not otherwise permitted by law.

FRA minimizes its data collection to that necessary to meet the agency's mission. As previously stated, data collected may be used in criminal or accident investigations, or during investigations of violations of any Federal railroad safety law.

Furthermore, as previously stated, Congress provided statutory protections for PII through the FAST Act, 49 U.S.C. 20168(h), which prohibits FRA from publicly disclosing image or audio recordings that FRA takes possession of after a railroad accident occurs. This provides FRA with a FOIA exemption for passenger locomotive recordings that FRA takes 1 of after a railroad accident, similar to the NTSB's exemption, which is also provided via statute.²⁰ The FAST Act also requires that FRA not publicly disclose locomotive audio and image recordings, or transcripts of communications between train, operating, and communication

²⁰ See 49 U.S.C. 1114(d) and 1154(a).



center employees on passenger trains. However, like the NTSB, FRA, as the Secretary's delegate, can make public any part of a transcript or any written description of visual information it determines is relevant to an accident at the time a majority of the other factual reports on the accident/incident are released to the public.

In addition, the final rule delineates allowable uses of both image and audio recording device data in § 229.136(f)(3) and mere public disclosure is not an authorized use. In practice, FRA would rarely take possession of recordings. For serious accidents, FRA anticipates the NTSB would take possession of such recordings with FRA having the opportunity to view or listen to the recordings as a party to the NTSB's investigation while conducting its own parallel investigation. For other accidents or incidents where only FRA is investigating, FRA inspectors may choose to view the recordings without taking possession of them. However, in instances where FRA has a legal or evidentiary need to take physical possession of a locomotive recording from a passenger railroad after an accident, the FAST Act protects those recordings from public release.

Data Quality and Integrity

In accordance with Section 552a(e)(2) of the Privacy Act of 1974, DOT should ensure that any PII collected and maintained by the organization is accurate, relevant, timely, and complete for the purpose for which it is to be used, as specified in the Department's public notice(s).

The final rule requires that passenger railroads adopt, maintain, and comply with a chain-of-custody procedure governing the handling and the release of locomotive recordings (49 CFR 229.136(f)). The chain-of-custody procedure must specifically address the preservation and handling requirements for post-accident/incident recordings that are provided to FRA or other Federal agencies during an accident/incident investigation. In addition, as previously stated, passenger railroads must use electronic security measures, and apply appropriate cybersecurity measures, to prevent unauthorized access to, and download, deletion, or alteration of, the recording system or its recordings.

A passenger railroad's failure to comply with its procedures would be a violation of the Federal railroad safety regulations. This requirement will further protect locomotive image recordings from inappropriate use, unauthorized release, potential for abuse, and the loss of personal privacy. The final rule also requires that the recording devices on the lead passenger locomotive should: (1) have a minimum 12-hour continuous recording capability; (2) record on a certified crashworthy event recorder memory module, or an alternative, remote storage system that provides at least equivalent data protections as provided by the module and has approved by FRA; and (3) have recordings that are accessible for review during an accident or incident investigation by FRA or other Federal agencies.



Security

DOT shall implement administrative, technical, and physical measures to protect PII collected or maintained by the Department against loss, unauthorized access, or disclosure, as required by the Privacy Act, and to ensure that organizational planning and responses to privacy incidents comply with OMB policies and guidance.

All FRA information technology (IT) systems must comply with all prevailing DOT, FRA, and Federal IT security and privacy standards, policies, and reporting requirements. Data collected by FRA will be protected by reasonable security safeguards against loss or unauthorized access, destruction, usage, modification, or disclosure during transmission and when stored or processed.

FRA would require data transferred to authorized FRA safety officials to be secured, encrypted, or, in the case of a display or print-out, physically protected, reducing the likelihood of the unauthorized disclosure of sensitive data.

FRA requires that wired or wireless connections provided on a locomotive be equipped to ensure only authorized passenger railroad personnel can download image and audio recordings from the certified crashworthy memory module. Due to potential for locomotive image and audio recording systems misuse, the final rule requires that railroad also must use electronic security measures, and apply appropriate cybersecurity measures, to prevent unauthorized access to, and download, deletion, or alteration of, the recording system or its recordings. Such security measures could include encryption technology for data at rest and transit or equivalent data protection measures, multifactor authentication, and password or passcode protection to access a memory module.

FRA personnel and contractors are required to attend security awareness and privacy training offered by DOT. Additionally, FRA personnel and contractors with significant security responsibilities and privileged access to systems that store PII data are given role-based specialized training in their core competency areas. This allows individuals with varying roles to understand how privacy and security impacts their roles and retain knowledge of how to properly and securely act in situations where they may use business information in the course of performing their duties. Access to FRA systems will be automatically restricted by systems and policies, with oversight conducted by the DOT/FRA Cybersecurity Office. No access will be allowed to FRA systems prior to receiving the necessary clearances and training as required by DOT/FRA.

FRA will not publicly disclose locomotive audio and image recordings or transcripts of communications by or among train employees or other operating employees, related to an accident or incident FRA is investigating, in accordance with 49 U.S.C. 20168(h). FRA



may make public a transcript or a written depiction of visual information it deems relevant to the accident at the time other factual reports on the accident are released to the public.

Accountability and Auditing

DOT shall implement effective governance controls, monitoring controls, risk management, and assessment controls to demonstrate that the Department is complying with all applicable privacy protection requirements and minimizing the privacy risk to individuals.

Whether data is downloaded and transmitted via wired or wireless technology, passenger railroads are responsible for ensuring the integrity of the process under § 229.136(d), which includes the use of electronic security measures, and the application of cybersecurity measures, to prevent unauthorized access to, and downloading, deletion, or alteration of the recording system or its recordings. FRA is responsible for identifying, training, and holding agency personnel accountable for adhering to all DOT privacy and security policies as well as all Federal regulations. In addition to these practices, other security and privacy policies and procedures will be consistently applied, especially as they relate to record protection, transmission, retention, and destruction. Federal and contract employees will be given clear guidance in their duties as they relate to collecting, using, processing, and securing data within FRA systems. Guidance will be provided in the form of mandatory annual security and privacy awareness training as well as acceptable rules of behavior. FRA will follow the FIPP as best practices for the protection of data that will be collected from the passenger railroads associated with the inward- and outward-facing image recording devices. In most instances, FRA will only receive recorded data from passenger railroads during accident investigations or investigations of railroad safety violations or criminal incidents. In accordance with Federal cybersecurity and privacy regulations and DOT Cybersecurity Policies, FRA will conduct regular periodic security and privacy assessments of the FRA system that will store the records collected as require by the final rule.

The FAST Act allows railroads to take enforcement or administrative action against employees who tamper with or disable an audio or inward- or outward-facing image recording device installed by the railroad. 49 U.S.C. 20168(f).

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Approval and Signature

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DOT Privacy Office - Approved - 09/18/2023



Appendix A – Recording Device Specifications

Locomotive Image Recording Device Functions:

The final rule provides the technical specification of locomotive image recording systems on passenger train lead locomotives. It also explains what must be captured by outward-facing image recording devices and has general functional requirements instead of equipment specifications to accommodate the development of future technologies capable of fulfilling the image recorder requirements.

The outward-facing image recording device requirements are intended to fulfill the safety-related investigation purposes of recording: (1) events leading up to a train collision; (2) highway-rail grade crossing or trespasser accidents, including motor vehicle operator actions leading up to such accidents and the functioning of any visible active grade crossing warning devices; (3) wayside signal indications; (4) visible condition of structures and track (e.g., position of switch points, broken rails where visible, bridge conditions, washouts, etc.) that an equipped locomotive approaches and travels over; and (5) any other events relevant to a collision or derailment. FRA developed the text of 49 CFR 229.136(b) with the goal of recording devices capturing images to provide information to help the safety-related investigations of the above-listed events and conditions.

Specifically, the final rule requires that the outward-facing image recording device system consist of one or more image recording device(s) (camera(s)) which must be aligned to point parallel to the centerline of tangent track on which the locomotive is traveling. FRA has specified that the recordings made would have to be able to distinguish different wayside signal aspects. FRA believes this feature of outward-facing image recordings would be critical in post-accident investigations in determining whether signal systems were properly functioning, properly displayed, and complied with by train crews.

After consideration of all comments received, FRA is adopting the requirements for outward-facing locomotive image recording devices in § 229.136(b)(1) as required in the final rule. The final rule requires that outward-facing image recording devices on lead passenger train locomotives must be able to function in both day and lowlight/nighttime conditions with illumination from the equipped locomotive's headlight. FRA also requires that outward-facing image recording devices must record at a minimum recording rate of 15 frames per second (fps) (or its equivalent). FRA believes a minimum 15 fps requirement will provide accident investigators and railroads a sufficient image recording to analyze the events leading up to a grade crossing collision or other collisions, while balancing cost concerns. FRA also proposes to require that an accurate time and date stamp be on outward-facing image recordings.



The FAST Act establishes that a railroad carrier is not required to cease or restrict operations upon a technical failure of an inward- or outward-facing image recording device, but that such device shall be repaired or replaced “as soon as practicable.” 49 U.S.C. 20168(j). FRA has specified in the final rule that “as soon as practicable” means that if a passenger train’s lead locomotive’s outward-facing image recording system fails, it cannot be used as a passenger train’s lead locomotive after the next calendar day’s inspection of the locomotive required by § 229.21 unless a railroad has first replaced or repaired the recording system. However, there is one exception. FRA revised the final rule to allow a lead locomotive used in long-distance intercity passenger train, as defined in 49 CFR 238.5, with a non-operational image recording device may remain as the lead locomotive until arrival at its destination terminal or its nearest forward point of repair, whichever occurs first. FRA made this revision after a consideration of the comments it received from the NPRM and reexamined how the repair requirement would affect long-distance intercity passenger trains.

The final rule also requires provides the minimum functional requirements for an inward-facing image recording device on a passenger train lead locomotive. These requirements do not apply to inward-facing image recorders installed on freight trains. This final rule does not specify the number of inward-facing recording devices that would be required in a passenger train’s lead locomotive, but rather that the installed devices must provide complete coverage of all areas of the locomotive cab where a crewmember typically may be positioned, including complete coverage of the instruments and controls required to operate the controlling locomotive in normal use. This includes image recording coverage of extra permanent seats in the cab and any jump seats. Multiple in-cab image recording devices are permissible if necessary to comply with the rule or for the railroad’s own purposes. FRA believes one of the best, proactive safety uses of an inward-facing camera system is to conduct operational tests to ensure operating employees’ compliance with the restrictions on the use of personal electronic devices under part 220, subpart C.

FRA requires that inward-facing recording devices record images at a rate of at least 5 fps (or its equivalent), since motion in the cab occurs at a much lower rate than in front of the lead locomotive and this frame rate can adequately record typical walking-speed actions. The final rule also requires that the inward-facing image recording system be able to record the desired actions using the ambient light in the cab. And, if ambient light levels drop too low for normal operation, the image recorder(s) must automatically switch to infrared or other operation that gives the recording sufficient clarity to comply with this rule’s requirements.

Next, parallel to the requirements for outward-facing image recording devices, the final rule also requires that any inward-facing image recordings in passenger train lead locomotives have an accurate date and time stamp. An accurate time and date stamp is essential to the



usefulness of these recordings, especially for post-accident investigations. Also mirroring the outward-facing cameras requirement, when there is an en route failure of a passenger locomotive's inward-facing image recording device, the locomotive cannot be used as a train's lead locomotive after the next calendar day's inspection of the locomotive as required by § 229.21, if the recording device is not first repaired or replaced. As stated above, the en route failure exception for long-distance intercity passenger trains with a non-operational image recording device applies to both inward- and outward-facing locomotive image recording devices.

The final rule requires that no image or audio recordings be made of any activities within a passenger locomotive's sanitation compartment as defined by existing 49 CFR 229.5. A locomotive's sanitation compartment is an enclosed compartment that contains a toilet facility for employee use. FRA believes such recordings would be an unwarranted invasion of personal privacy and would likely be illegal.

Specified inspection, testing, and maintenance of locomotive image and audio recording device systems on passenger train lead locomotives similar to those found in FRA's locomotive event recorder regulation would also be required by the final rule. In addition, the locomotive's image recording system (and any installed audio recording system) are required to have self-monitoring features. This means the recording system can monitor its own operation and display an indication to a passenger train's crew when any data required to be stored is not stored, or when the stored data does not match the data received from the image recording devices. At a minimum, the self-monitoring features must indicate to the locomotive's crew whether the system is turned on, and, in some fashion, that power is available to the system. The final rule leaves to the passenger railroad's discretion which self-monitoring features to install to avoid inhibiting future changes in available technology that could be used for system self-monitoring. Furthermore, the final rule requires railroads to download a sample recording during the locomotive's annual test, which serves as an appropriate back-up test, similar to the periodic and annual inspection requirements in existing 49 CFR 229.135 for locomotive event recorders.

Finally, in accordance with the FAST Act, FRA requires for passenger locomotives that image recordings be retained on a certified crashworthy event recorder memory module. FRA has amended existing part 229, appendix D to state the existing crashworthiness standards in that appendix for locomotive event recorders also apply to a memory module used to store the data recorded by the image recording devices on lead passenger train locomotives and any audio recording devices a passenger railroad installs. FRA believes the existing crashworthy memory module requirements in appendix D intended to protect the microprocessor-based data recorded by a locomotive's event recorder are also the appropriate standards for microprocessor data a lead passenger locomotive's image and



audio recording system's record. Appendix D establishes the general requirements, testing sequence, and required marking for memory modules certified by their manufacturers as crashworthy. Any device meeting the performance criteria in appendix D would comply with the crashworthiness requirement in the final rule. However, as stated in the final rule, lead locomotive image and audio recording devices may record its data to a remote storage system that provides at least equivalent data protections to a crashworthy event recorder memory module as an alternative. FRA is not requiring that image recording devices in freight locomotives be equipped with a crashworthy memory module.

Enforcement Procedures - Protections Against Retaliation or Harassment

The FAST Act prohibits passenger railroads from using an in-cab audio or image recording to retaliate against an employee. 49 U.S.C. 20168(i). This section addresses illegal retaliation implicated by existing statutes such as the railroad employee whistleblower law at 49 U.S.C. 20109, which are addressed by the grievance process remedies for wrongful discharge under the Railway Labor Act (45 U.S.C. 151 et seq.). However, FRA has attempted to address Congress' intent regarding retaliation in the final rule text by limiting how passenger railroads can use audio or image recordings.

While enforcement of prohibited retaliation against employees does not lie with FRA, but rather with other Federal and state agencies or the courts in private causes of action, FRA believes passenger railroads should adopt and adhere to policies that strictly prohibit such potential non-safety related abuses of locomotive recordings in violation of the FAST Act's prohibition.